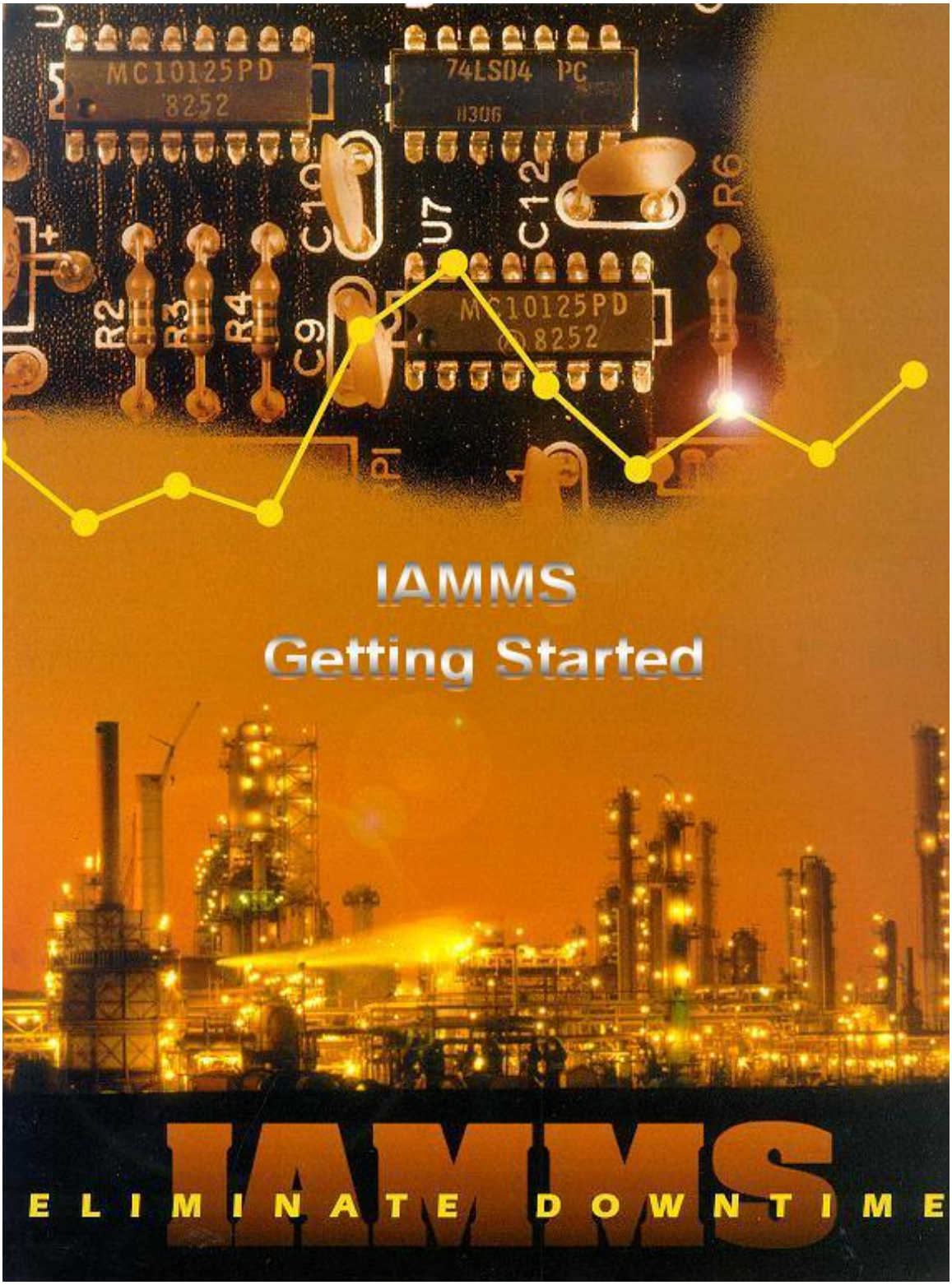
MC10125PD
8252
74LS04 PC
U7
C10
C12
R6
R2
R3
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IAMMS
Getting Started
IAMMS
ELIMINATE DOWNTIME

Table of Contents

Chapter 1

Introduction

This manual provides a general guide to help new users understand the basic structure of the IAMMS System and provides step-by-step instructions on how the enter new equipment and how to enter maintenance information into the IAMMS system. Also a high-level overview is provided to briefly expose new users to many of the IAMMS features, benefits, and requirements. For detailed information on all of IAMMS features, see the IAMMS Users Manual.

In addition to the information presented in this manual, an on-line help feature is provided.

System Overview and Features

IAMMS was designed and developed (*by maintenance people for maintenance people*) to be user friendly for technicians and provide reports to effectively plan and schedule maintenance. IAMMS can also provide information needed by Process and Environmental Engineers. IAMMS can help your organization move from reactive to predictive maintenance by providing detailed failure information that can enable you to focus resources on the "bad actors" and to assist in finding and eliminating the "root cause of failure. IAMMS was created with the premise that information and data must be easy to input and easy to extract. Every screen, report, and graph was designed with this key premise in mind.
IAMMS can generate reports on equipment availability by plant, unit or an individual piece of equipment. The ability to share maintenance experience on similar equipment can facilitate the identification and elimination of "root causes" of equipment failure in a timely manner, identify potential problems, avoid duplication of effort and provide opportunities for cost saving.

To use IAMMS effectively, you must first know how to use Microsoft Windows. This manual does not explain how to use Microsoft Windows. *Refer to your Microsoft Windows user manual for those instructions.*

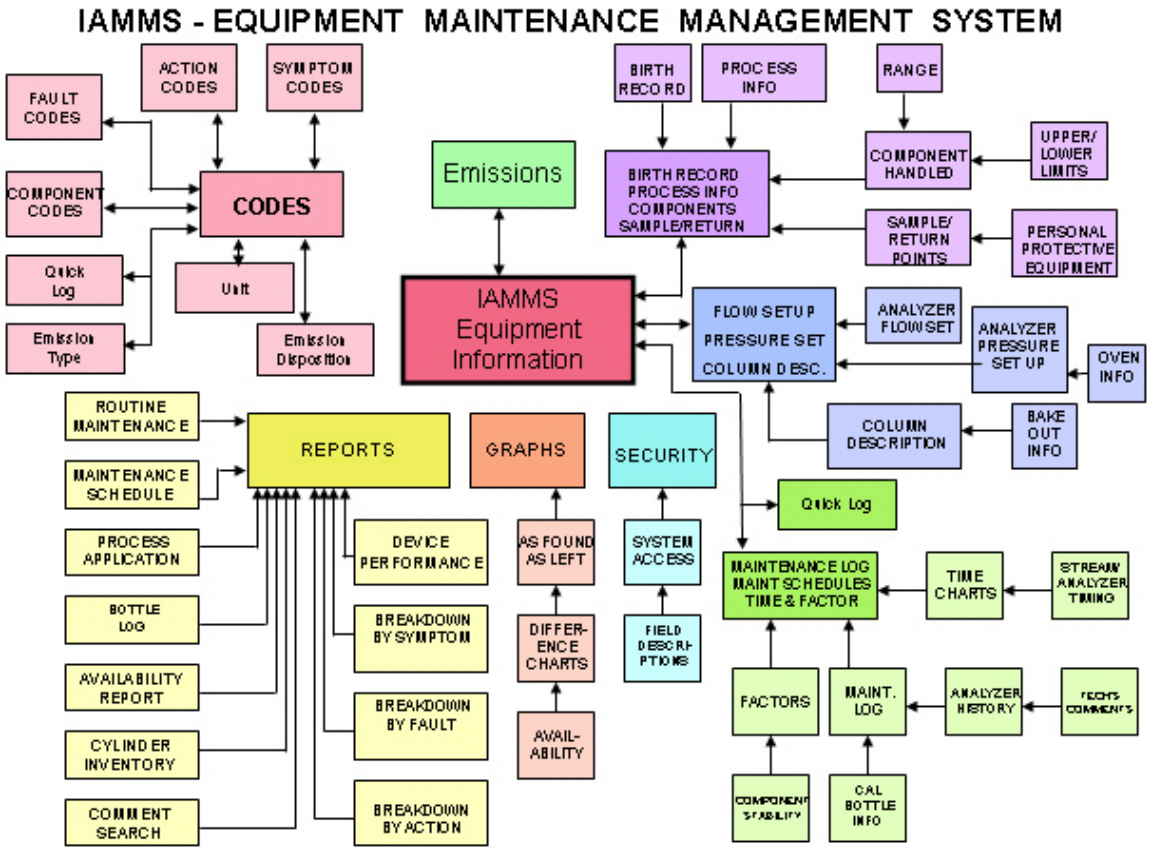
IAMMS includes custom screens to document emissions associated with maintenance activities and includes user programmable alarms for all scheduled activities, cylinder certification expiration, and alarms to indicate reportable quantities have been exceeded.

IAMMS Features:

- Meets Documentation Requirements
  - ISO 9001:2000 Quality Management Standard
  - ISO 14001 Environmental Management System Standards
  - OSHA 1910 Process Safety Management
- Easily captures and reports on emissions associated with routine maintenance activities
- Can be set-up to Alarm when reportable quantities are exceeded
- Users can program Alarms associated with scheduled activities
- IAMMS can automatically capture and document EPA daily drift test results
- Facilitates communication across plant and between locations
- Builds large shared database to facilitate predictive maintenance
- Easy to use windows environment
- Easy to convert existing data

Basic System Map

The following graphic depicts the basic mapping of the IAMMS System and some of IAMMS' key features. This "map" does not cover all of IAMMS' features. For a complete list and description of all IAMMS' features, see the IAMMS Users Manual.



IAMMS System Map 1

Chapter 2

IAMMS Login Window

Startup from Windows

The IAMMS system is started from the IAMMS application window in the Microsoft Windows **Program Manager** window or from an ICON on your desktop.

Start the IAMMS system as follows:

Double-click on the IAMMS icon in the IAMMS application window.

IAMMS

The IAMMS Login window appears.
IAMMS requires a valid User ID and Password to logon. This information is entered in the **IAMMS Login** window.

If you do not have a valid User ID or have trouble accessing the IAMMS system, contact your IAMMS System Administrator. The IAMMS System Administrator issues valid User IDs and passwords.

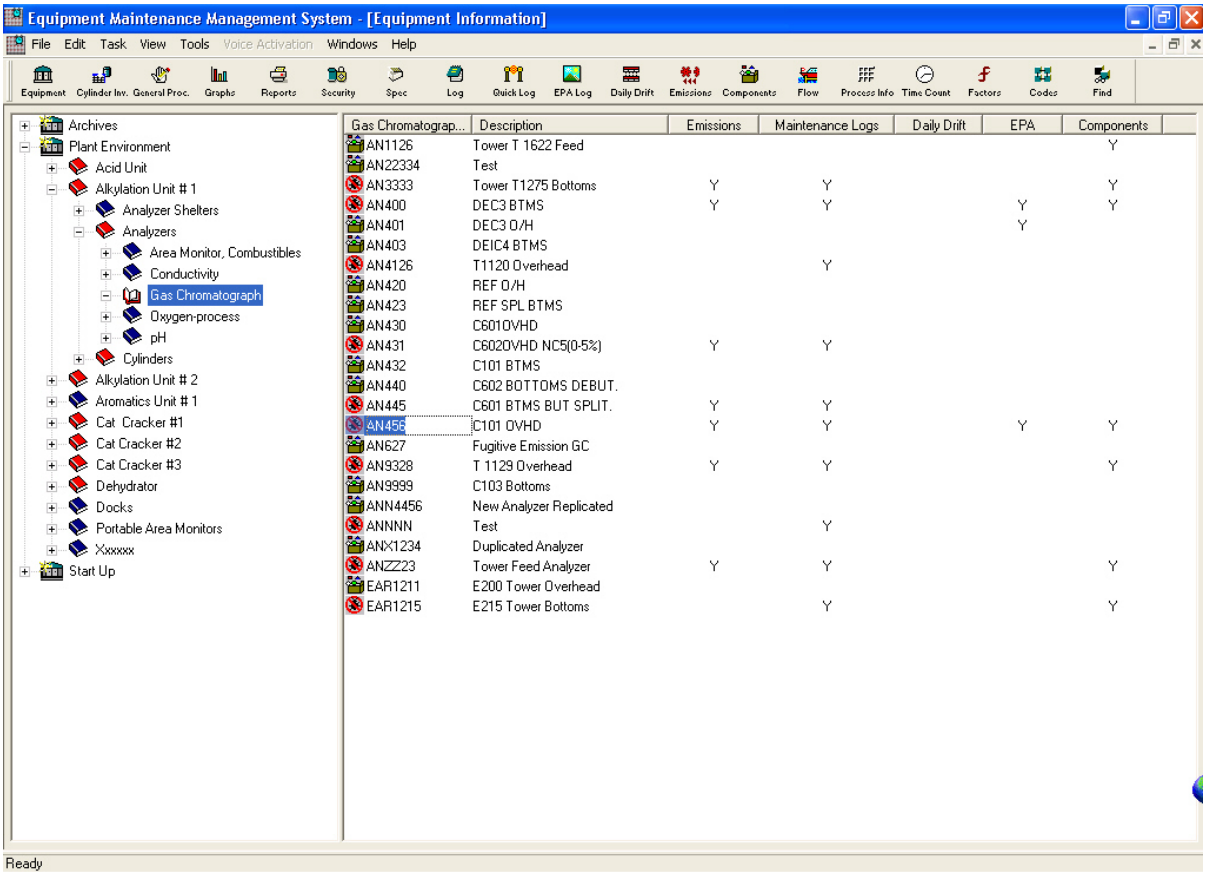
Complete the Login window as follows:

1) Type your user ID in the User ID field, then press the tab key of click on the Password field.

2) Type your password in the Password field.

> ***Note:*** For security reasons, asterisks appear in place of the characters typed in the Password field.

3) Click on OK or press the “Enter” key.
IAMMS will startup in the same screen that you were viewing when you last logged out. Note: The primary starting screen is the Equipment Information Screen.



Chapter 3

Entering New Equipment into IAMMS

Most information within the IAMMS system is referenced to the equipment tag number. Therefore users must enter the new equipment tag number first. Once the equipment tag number is entered, users now have access to a number of screens specifically associated with the newly entered equipment tag number. These screens include the following:

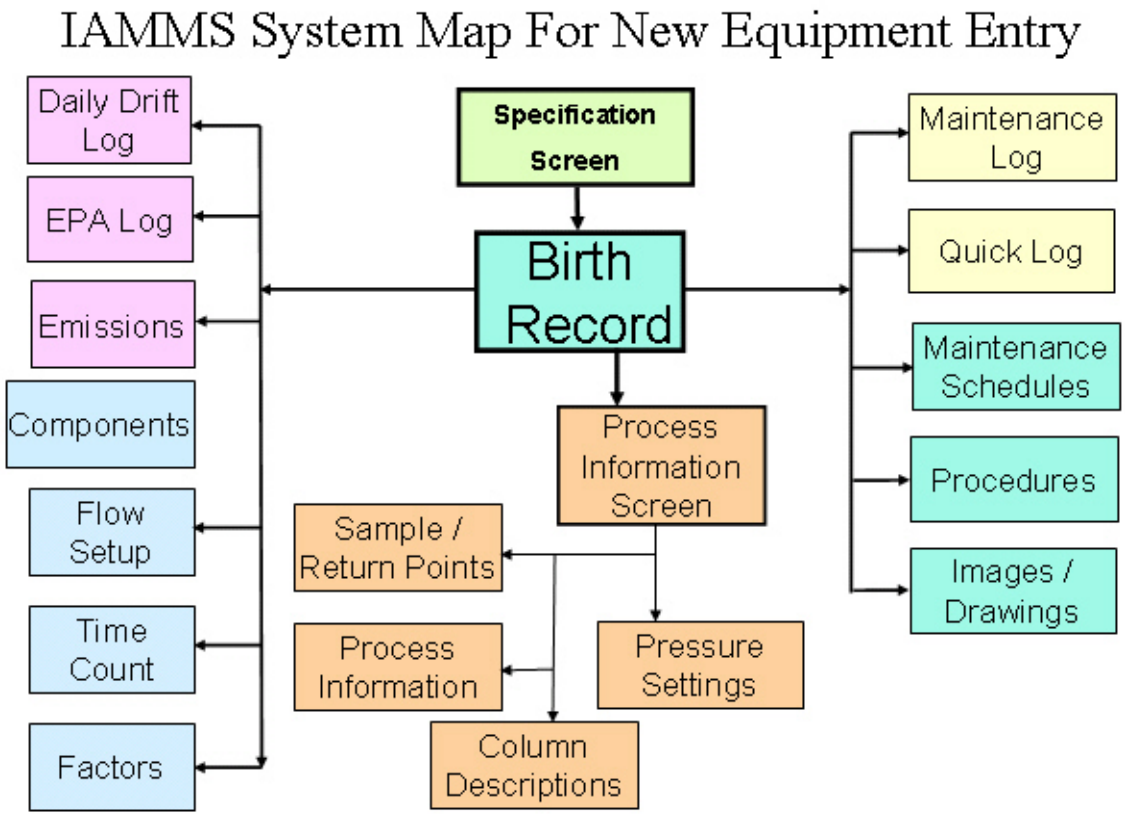
1. Maintenance Log
2. Quick Log
3. Equipment Specific Procedures
4. Equipment Specific Images and Drawings
5. Maintenance Schedules
6. Process Information
7. Column Description
8. Sample and Return Points
9. Pressure Settings
10. Components
11. Time / Count
12. Factors
13. Emissions
14. Flow Set-up
15. EPA Log
16. Daily Drift Log

Note: None of these screens can be accessed until the new equipment tag number has been entered into the Birth Record Screen.

Once the new equipment number has been entered, Maintenance Log information and other data associated with this equipment tag number can be entered. After entering information associated with this new equipment tag number, several screens for extracting information concerning this new equipment can be extracted from the following screens:

1. Reports (Twenty One (21) standard Reports are Available)
2. Graphs (Three (3) Standard Graphs are Available)
3. Find

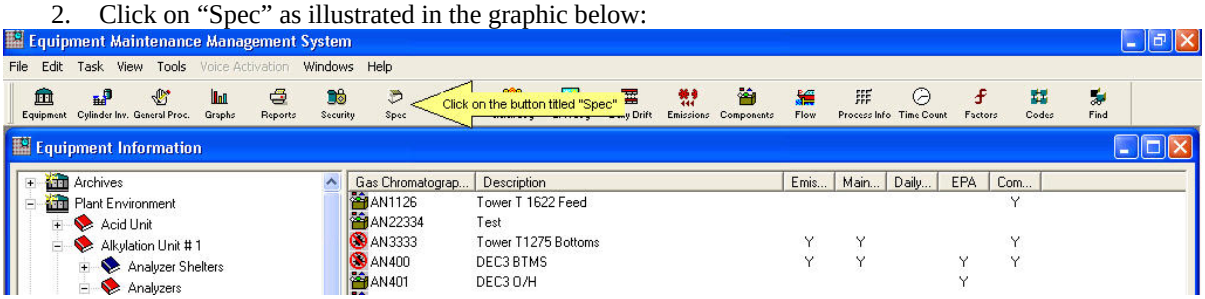
The step-by-step process for entering new equipment into IAMMS will be described on the following page. These instructions will reference the *IAMMS New Equipment Entry Process Map.*



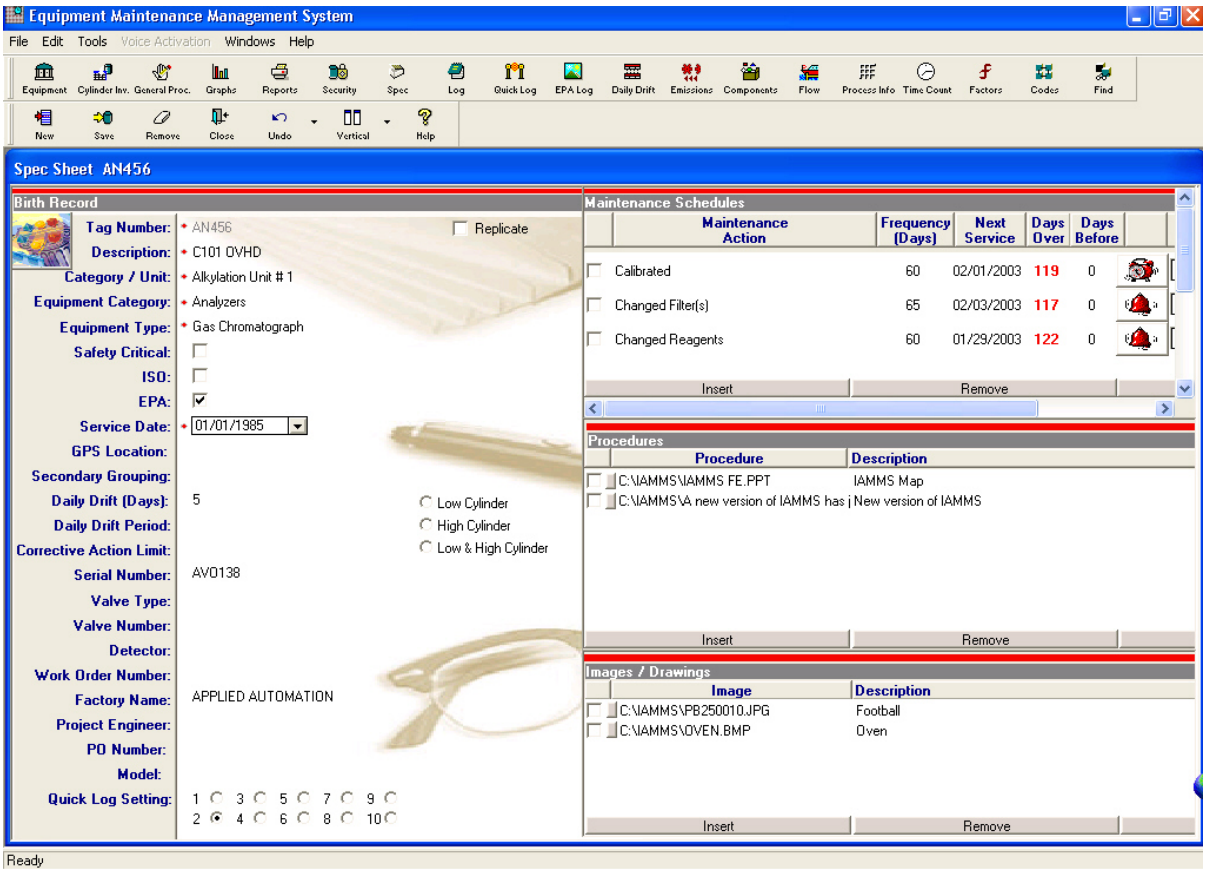
IAMMS New Equipment Entry Process Map

Process for Entering New Equipment into the IAMMS System

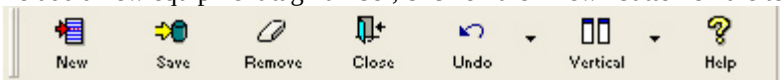
1. Login to the IAMMS system. (See Chapter 2)
2. Click on "Spec" as illustrated in the graphic below:



This will bring up the Specification Screen for the last piece of equipment that was accessed. (See Specification Screen below:

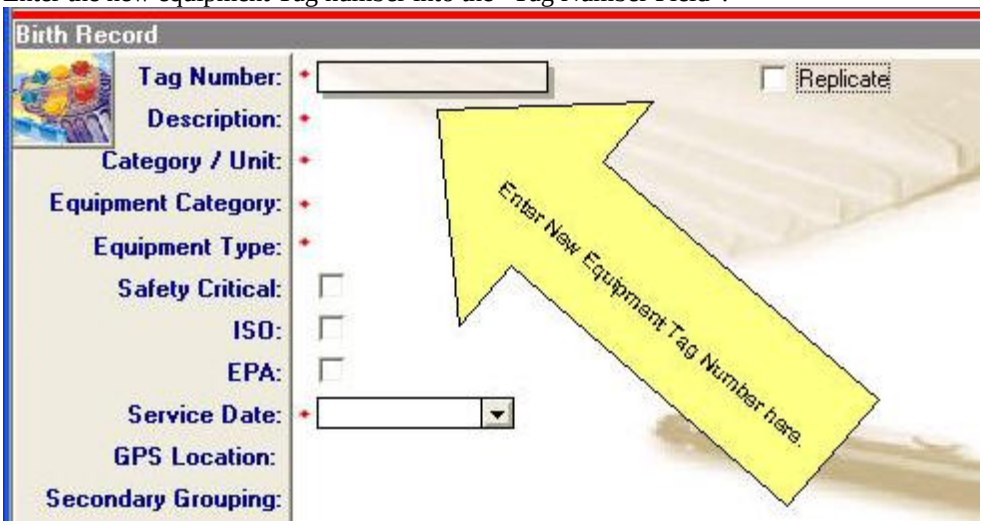


3. To add a new equipment tag number, click on the “New” button on the toolbar.



This will clear the contents of the Birth Record, Maintenance Schedules, Procedures, and Image / Drawing Screens.

4. Enter the new equipment Tag number into the “Tag Number Field”.



5. After entering the new equipment tag number, enter appropriate information into each of the applicable fields on the Birth record. The following is a list and description of each of the fields on the Birth Record:

Birth Record Fields:

Field Name	Description	Drop Down List from Codes	Required Optional Non-Editable	Default Value
Tag Number	The tag number of equipment.	No	Required	None
Description	What is the equipment used for?	No	Required	None
Category / Unit	The unit the equipment is located in or assigned to.	Yes	Required	None
Equipment Category	Basic equipment category.	Yes	Required	None
Equipment Type	What kind of equipment is it?	Yes	Required	None
Safety Critical	Select this box if the equipment has been identified as being safety critical per OSHA 1910 PSM.	No	Optional	None
ISO	Select this box if the equipment has been identified as being quality critical to process operation per ISO 9000.	No	Optional	None
EPA	Select this box if the equipment has been identified as being environmentally critical to process operation per ISO 14001.	No	Optional	None
Service Date	Date equipment Entered Into Database.	No	Required	None
GPS Location	Global Positioning Satellite coordinates of the equipment.	No	Optional	None
Secondary Grouping	This allows equipment to be assigned specific secondary grouping criteria to allow for sorting by these criteria.	Yes	Optional	None
Daily Drift (Days)	The number of days selected for the daily drift calculation. (The entry should be 5 or 7).	No	Optional	None
Daily Drift Period		No	Optional	None
Corrective Action Limit	If the daily drift test result is outside of this limit IAMMS will require users to enter a comment in the comment field.	No	Optional	None
Serial Number	The serial number of the equipment.	No	Optional	None
Value Type	For Gas Chromatographs, the type of chromatographic valve.	No	Optional	None
Valve Number	For Gas Chromatographs, the number of chromatographic valves.	No	Optional	None

Detector	The type of detector used on the analyzers.	No	Optional	None
Factory Name	The name of the factory that manufactured the equipment.	No	Optional	None
Project Engineer	The name of the primary project engineer.	No	Optional	None
Purchase Order Number	The original project purchase order number.	No	Optional	None
Model:	The model number for the equipment.	No	Optional	None
Quick Log Setting	Selects group of 10 quick log settings for quick access when updating maintenance activities for this equipment.	No	Optional	None
Daily Drift Cylinder Validation - Low Cylinder - High Cylinder - Low & High Cylinder	Checking one of these boxes determines which cylinder(s) are used for Daily Drift Cylinder Validation	No	Optional	Unchecked
Replicate	Used for duplicating equipment. This box is used with the replicate function to identify what will be duplicated. A check in this box indicates the desire for duplication of this equipment.	No	Optional	Unchecked

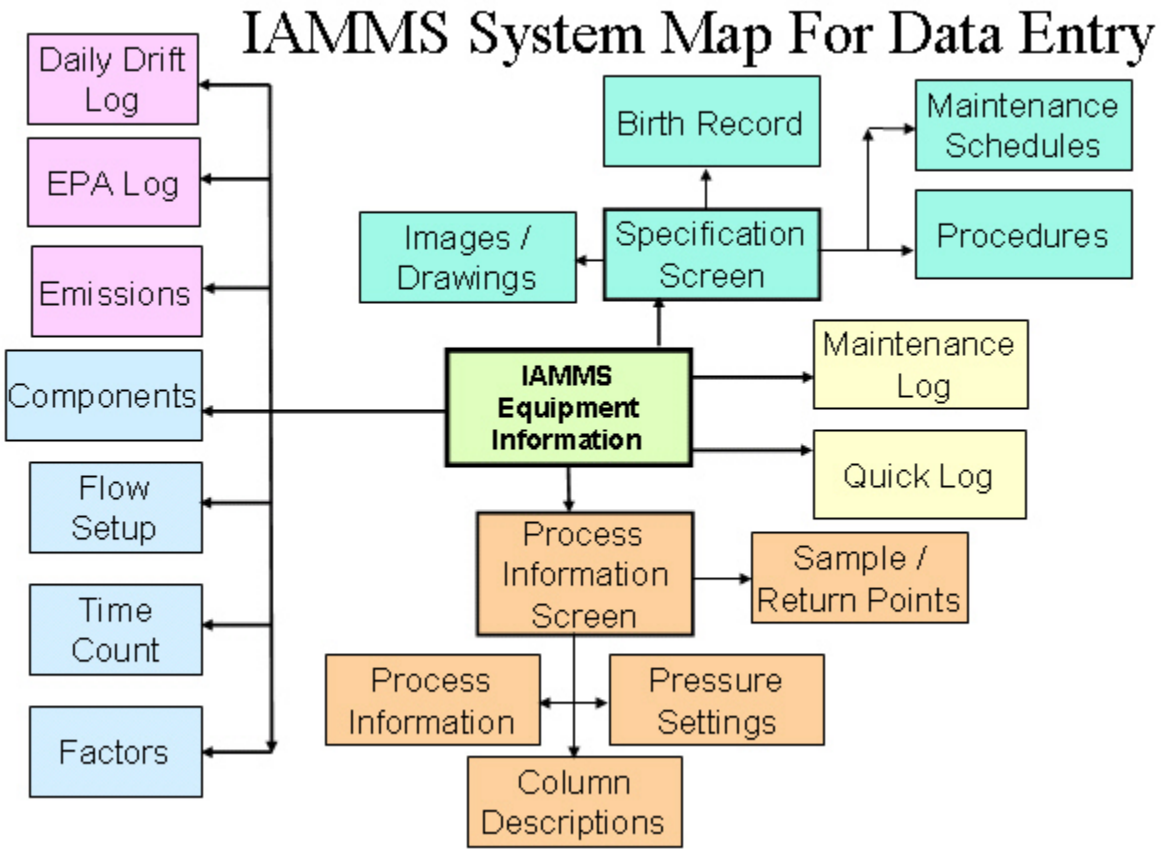
6. After entering information into all applicable fields on the Birth Record, click on the "Save" button on the toolbar.

7. This completes the steps necessary to add a new piece of equipment into the IAMMS system. Users can now make Maintenance Log entries and enter information associated with this equipment into any of the sixteen (16) specific equipment associated screens listed at the beginning of this chapter.

Chapter 4
Entering Maintenance Log Information into IAMMS

There are two methods for entering maintenance history into the IAMMS system. Both methods update the IAMMS database. However, one method provides for quicker user entry of data into the IAMMS database. This method, using the Quick Log, is used for most routine recordings of maintenance history. The Maintenance Log allows users more flexibility to customize and expand on the maintenance history entry. The Maintenance Log is typically used for entering unusual maintenance activities. This chapter will review both methods for entering maintenance history information into the IAMMS system.

The following process map provides a system level look at the data entry process.



IAMMS Data Entry Process Map

Note that both entry methods require users to complete the following steps to prepare for data entry.

1. Log into the IAMMS system. (See Chapter 2)
2. Click on the “Equipment” button on the main toolbar.

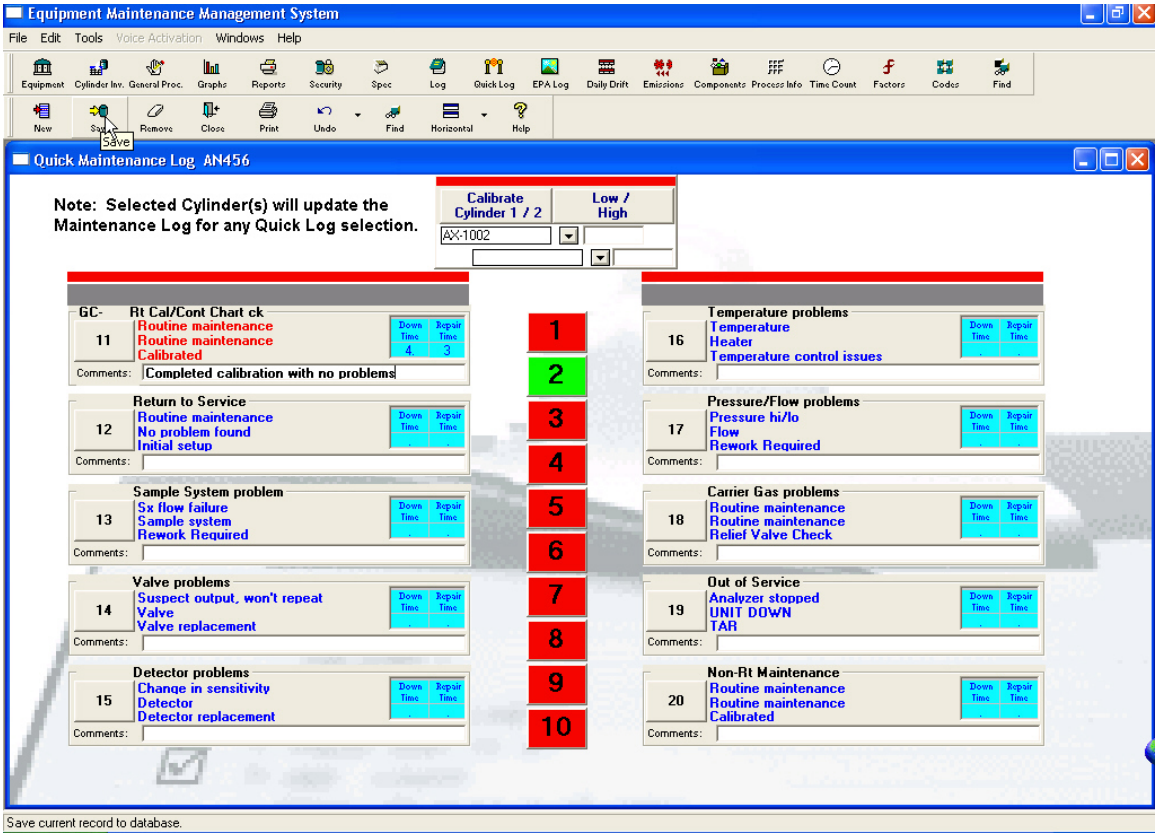
3. This will bring up the Equipment Information" screen.
4. Expand the desired Unit and Equipment Category folders.
5. Click on the appropriate Equipment Type. (IE: Gas Chromatograph) This will display a list of all "Gas Chromatographs" associated with the selected unit.
6. Click on an individual equipment tag number. By clicking on a specific equipment tag number, users can now access all screens that are associated with this specific piece of equipment.
7. Users are now ready to use one or both of the methods for entering data into the IAMMS database.

Note: Double clicking on the equipment tag number will take users directly to the Specification screen.

Method One – Quick Log

The first method covered will be the Quick Log method. This is the most frequently used method for entering data into IAMMS.

Quick Log provides users a rapid method of making routine maintenance log entries. This screen contains 100 available quick maintenance log entry options with pre-selected symptom, action, and fault codes for routine activities associated with the selected equipment. When the Quick Log ICON is selected, the ten most used maintenance log scenarios, for the specific equipment tag selected by the user, are displayed. (The ten maintenance log scenarios for this equipment are selected in the birth record.) The user then clicks on the button for the scenario that matches the completed maintenance activity, enters down time, repair time, and comments. The user can then click on Save and the Maintenance Log entry will successfully complete.



The pre-selected symptom, action, and fault codes are setup in the "CODE" Screen. See the chapter on "Codes" in the user's manual for more information on how to setup these pre-selected quick log settings.

When this screen is saved it will create a record in the Maintenance Log Table. The saved information can be viewed in the Maintenance Log screen.

Quick Log Fields:

Field Name	Description	Drop Down List from Codes	Required Optional Non-Editable	Default Value
Down Time	The time interval between the time maintenance was started and the equipment was returned to operations. This time is used by the equipment availability report.	No	Required	None
Repair Time	This is a subset of Down Time. It identifies the actual amount of time required to repair the equipment.	No	Required	None
Cal Cylinder 1	The serial number of the calibration standard.	Yes – This drop down list is generated based on unit(s) assigned to cylinders in the cylinder inventory screen	Optional	None
Cal Cylinder 2	If applicable, the serial number of the second calibration standard.	Yes – This drop down list is generated based on unit(s) assigned to cylinders in the cylinder inventory screen	Optional	None
Comments	This field is used to type or paste detailed information concerning the maintenance activity. This could include troubleshooting information, key learnings, or other pertinent information.	No	Optional	None

Method Two – Maintenance Log

Again, this method is usually used when unusual maintenance has been performed and users need to select non-routine Symptom, Action, or Fault Codes and / or wish to paste additional information into the comments section of the Maintenance Log.

Create a New Maintenance Log Record

Create a new *Log* record as follows:

1) Select **NEW** from the **FILE** drop-down menu or tool bar.

2) Type the pertinent information into the Maintenance Log fields.

3) Select **SAVE** from the **FILE** drop-down menu or tool bar.

Change a Maintenance Log Record

Change *Log* information as follows:

1) Locate the information you want to edit, and re-type or select a new item from the drop down box.

2) Select **SAVE** from the **FILE** drop-down menu or tool bar.

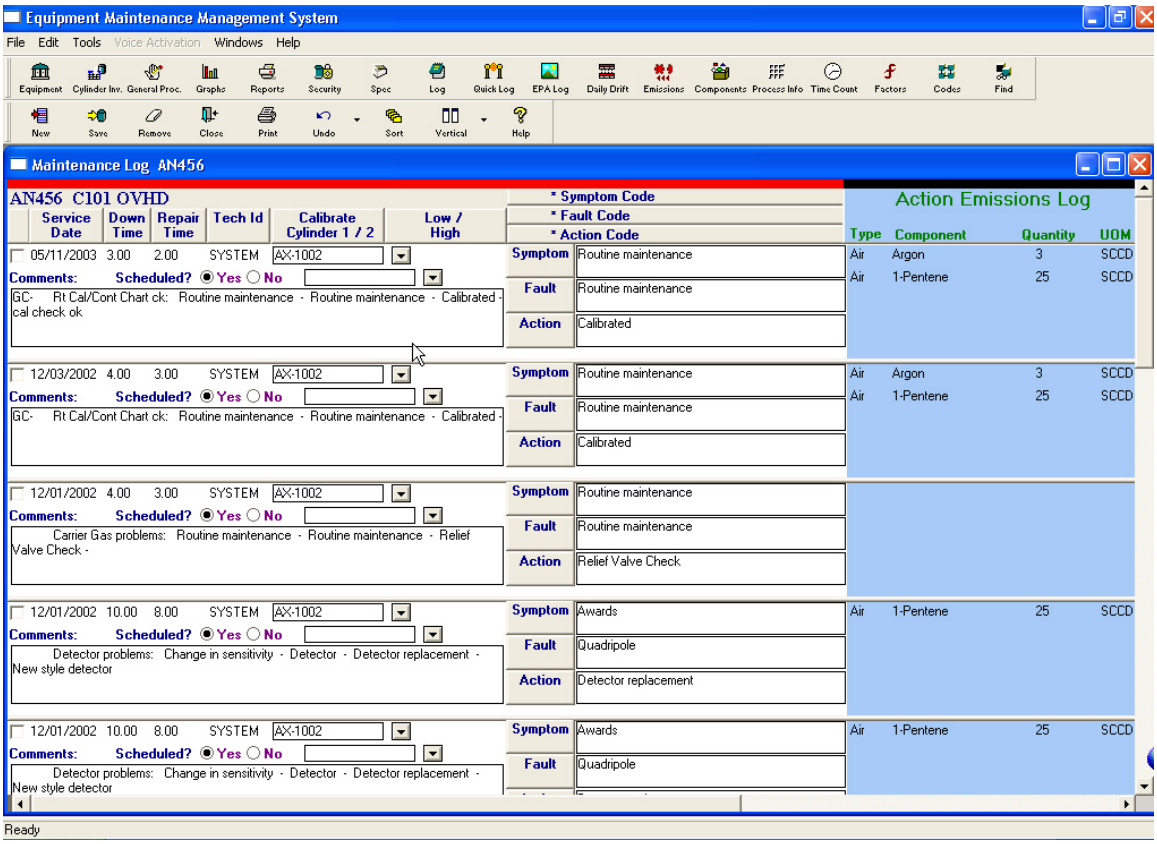
3) Repeat step 1 and 2 to edit more information.

Delete a Maintenance Log Record

Delete a **Log** as follows:

1) Select the line or lines by clicking in the square box to the left of the row or rows you want to delete; a “check” will appear in the **delete box(s)**.

2) Select **REMOVE** from the **FILE** drop-down menu or tool bar.



Maintenance Log Fields:

Field Name	Description	Drop Down List from Codes	Required Optional Non-Editable	Default Value
☐	The “delete box”, marks a row for delete when checked.	NO	Optional	Un-checked
Service Date	The date that the maintenance / calibration was performed	No	Required	None
Down Time	The time interval between the time maintenance was started and the equipment was returned to operations. This time is used by the equipment availability report.	No	Required	None
Repair Time	This is a subset of Down Time. It identifies the actual amount of time required to repair the equipment.	No	Required	None
Tech ID	The initials of the technician that performed the maintenance.	No	Optional	None
Cal Cylinder 1	The serial number of the calibration standard.	Yes – This drop down list is	Optional	None

		generated based on unit(s) assigned to cylinders in the cylinder inventory screen		
Cal Cylinder 2	If applicable, the serial number of the second calibration standard.	Yes – This drop down list is generated based on unit(s) assigned to cylinders in the cylinder inventory screen	Optional	None
Symptom	The symptom code identifies the behavior of the equipment prior to the maintenance activity.	Yes	Required	None
Fault	The maintenance fault code identifies the actual part or assembly that caused the failure.	Yes	Required	None
Action	The maintenance action code identifies the action taken on the piece of equipment. Note: The action code is used to increment the scheduling report and to populate the maintenance log with the emissions associated with the maintenance action.	Yes	Required	None
Comments	This field is used to type or paste detailed information concerning the maintenance activity. This could include troubleshooting information, key learnings, or other pertinent information.	No	Optional	None
Action Emissions Log	When an action code is entered that has associated emissions documented in IAMMS, these fields are automatically populated. If no emissions have been documented for this action code, and emissions do occur during this maintenance activity, the emissions can be entered manually using the drop down field boxes.	Yes	Optional	Depends on which action code is entered.

Chapter 5
Getting More Detailed IAMMS Information

The intent of the "Getting Started Manual" is to provide users with basic quick start information on how to enter new equipment and how to make maintenance log data entries into the IAMMS System. This manual was not intended to cover all of the features available in the IAMMS System. For more detailed information covering all available features of IAMMS, reference the IAMMS Users Manual. To obtain copies of the IAMMS Users Manual, contact your CryVon sales representative.

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